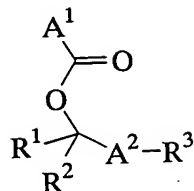


CLAIMS:

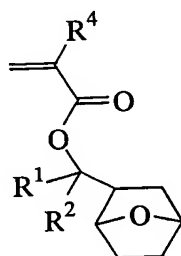
1. An ester compound having the general formula (1):



(1)

- 5 wherein  $A^1$  is a polymerizable functional group having a carbon-to-carbon double bond,  $A^2$  is a divalent group selected from among furandiyl, tetrahydrofurandiyl and oxanorbornanediyl,  $R^1$  and  $R^2$  are each independently a  
 10 straight, branched or cyclic monovalent hydrocarbon group having 1 to 10 carbon atoms, or  $R^1$  and  $R^2$  may bond together to form an aliphatic hydrocarbon ring with the carbon atom to which they are bonded, and  $R^3$  is hydrogen or a straight, branched or cyclic monovalent hydrocarbon group having 1 to  
 15 10 carbon atoms which may contain a hetero atom.

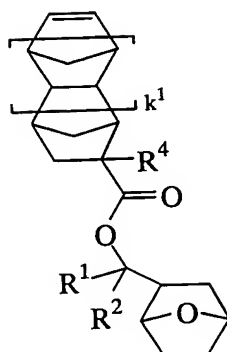
2. The ester compound of claim 1 having the general formula (2):



(2)

- wherein  $R^1$  and  $R^2$  are as defined above, and  $R^4$  is hydrogen or  
 20 methyl.

3. The ester compound of claim 1 having the general formula (3):

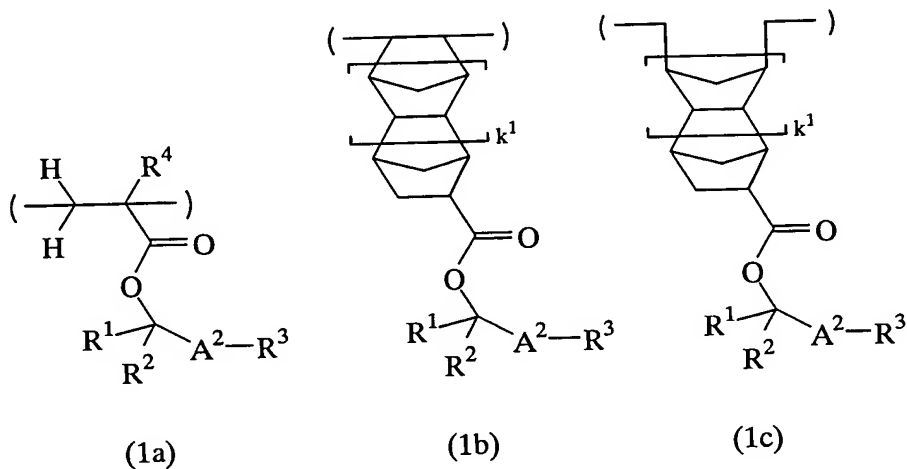


(3)

wherein  $R^1$  and  $R^2$  are as defined above,  $R^4$  is hydrogen or methyl, and  $k^1$  is 0 or 1.

4. A polymer comprising recurring units derived from the ester compound of claim 1.

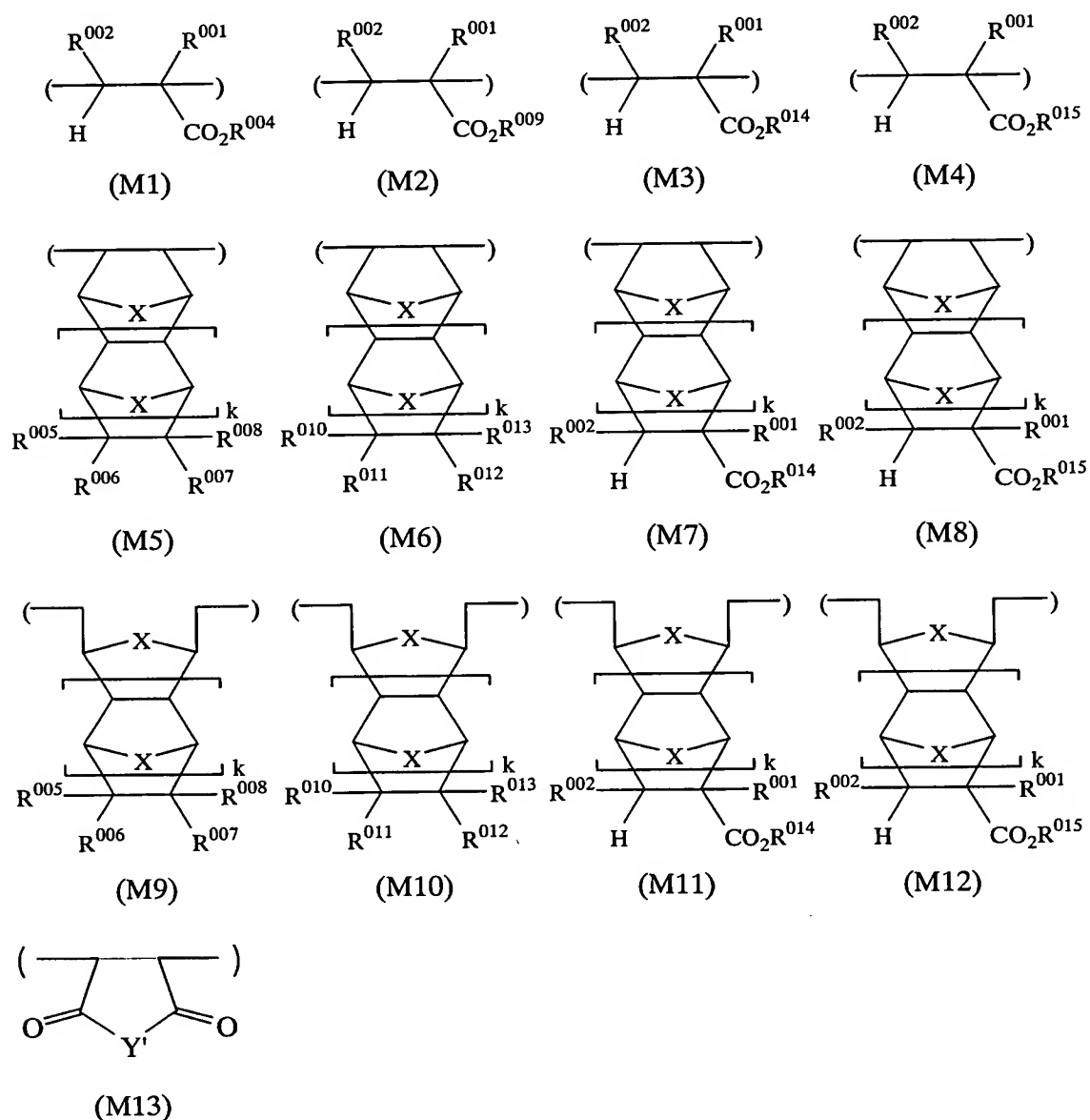
5. A polymer comprising recurring units of any one of the general formulae (1a) to (1c):



wherein  $A^1$  is a polymerizable functional group having a carbon-to-carbon double bond,  $A^2$  is a divalent group selected from among furandiyl, tetrahydrofurandiyl and oxanorbornanediyl,  $R^1$  and  $R^2$  are each independently a

straight, branched or cyclic monovalent hydrocarbon group having 1 to 10 carbon atoms, or R<sup>1</sup> and R<sup>2</sup> may bond together to form an aliphatic hydrocarbon ring with the carbon atom to which they are bonded, R<sup>3</sup> is hydrogen or a straight, branched or cyclic monovalent hydrocarbon group having 1 to 10 carbon atoms which may contain a hetero atom, R<sup>4</sup> is hydrogen or methyl, and k<sup>1</sup> is 0 or 1.

6. The polymer of claim 4, further comprising recurring units of any one of the general formulae (M1) to (M13):



wherein  $R^{001}$  is hydrogen, methyl or  $CH_2CO_2R^{003}$ ;

$R^{002}$  is hydrogen, methyl or  $CO_2R^{003}$ ;

$R^{003}$  is a straight, branched or cyclic alkyl group of 1 to 15 carbon atoms;

5  $R^{004}$  is hydrogen or a monovalent hydrocarbon group of 1 to 15 carbon atoms having a carboxyl or hydroxyl group;

at least one of  $R^{005}$  to  $R^{008}$  represents a monovalent hydrocarbon group of 1 to 15 carbon atoms having a carboxyl or hydroxyl group while the remaining R's independently  
10 represent hydrogen or a straight, branched or cyclic alkyl group of 1 to 15 carbon atoms, or  $R^{005}$  to  $R^{008}$ , taken together, may form a ring, and in that event, at least one of  $R^{005}$  to  $R^{008}$  is a divalent hydrocarbon group of 1 to 15 carbon atoms having a carboxyl or hydroxyl group, while the remaining R's  
15 are independently single bonds or straight, branched or cyclic alkylene groups of 1 to 15 carbon atoms;

$R^{009}$  is a monovalent hydrocarbon group of 2 to 15 carbon atoms containing at least one partial structure selected from among ether, aldehyde, ketone, ester, carbonate, acid  
20 anhydride, amide and imide;

at least one of  $R^{010}$  to  $R^{013}$  is a monovalent hydrocarbon group of 2 to 15 carbon atoms containing at least one partial structure selected from among ether, aldehyde, ketone, ester, carbonate, acid anhydride, amide and imide, while the  
25 remaining R's are independently hydrogen or straight, branched or cyclic alkyl groups of 1 to 15 carbon atoms, or  $R^{010}$  to  $R^{013}$ , taken together, may form a ring, and in that event, at least one of  $R^{010}$  to  $R^{013}$  is a divalent hydrocarbon group of 1 to 15 carbon atoms containing at least one partial  
30 structure selected from among ether, aldehyde, ketone, ester, carbonate, acid anhydride, amide and imide, while the remaining R's are independently single bonds or straight, branched or cyclic alkylene groups of 1 to 15 carbon atoms;

$R^{014}$  is a polycyclic hydrocarbon group having 7 to 15  
35 carbon atoms or an alkyl group containing a polycyclic hydrocarbon group;

$R^{015}$  is an acid labile group;

- X is CH<sub>2</sub> or an oxygen atom or sulfur atom;  
Y' is -O- or -(NR<sup>f</sup>)-;  
R<sup>f</sup> is hydrogen atom or a straight, branched or cyclic  
alkyl group of 1 to 15 carbon atoms; and  
5 Letter k is 0 or 1.
7. A resist composition comprising the polymer of claim 4.
8. A process for forming a resist pattern comprising the  
10 steps of:  
applying the resist composition of claim 7 onto a  
substrate to form a coating,  
heat treating the coating and then exposing it to  
high-energy radiation or electron beams through a photomask,  
15 and  
optionally heat treating the exposed coating and  
developing it with a developer.